

1634/12

Please type a plus sign (+) inside this box → ☐**TRANSMITTAL
FORM**

(to be used for all correspondence after initial filing)

Application Number	09/938,744
Filing Date	August 24, 2001
First Named Inventor	Yumin Mao et al.
Group Art Unit	1634
Examiner Name	Whisenant, Ethan C.
Attorney Docket Number	A34606-PCT-USA-A

Total Number of Pages in This Submission

ENCLOSURES (check all that apply)

- | | | |
|--|---|---|
| <input type="checkbox"/> Fee Transmittal Form
<input type="checkbox"/> Fee Attached
<input type="checkbox"/> Amendment / Reply
<input type="checkbox"/> After Final
<input type="checkbox"/> Affidavits/declaration(s)
<input type="checkbox"/> Extension of Time Request
<input type="checkbox"/> Express Abandonment Request
<input checked="" type="checkbox"/> Information Disclosure Statement
<input type="checkbox"/> Certified Copy of Priority Document(s)
<input type="checkbox"/> Response to Missing Parts/Incomplete Application
<input type="checkbox"/> Response to Missing Parts under 37 CFR 1.52 or 1.53 | <input type="checkbox"/> Assignment Papers (for an Application)
<input type="checkbox"/> Drawing(s)
<input type="checkbox"/> Licensing-related Papers
<input type="checkbox"/> Petition
<input type="checkbox"/> Petition to Convert to a Provisional Application
<input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address
<input type="checkbox"/> Terminal Disclaimer
<input type="checkbox"/> Request for Refund
<input type="checkbox"/> CD, Number of CD(s) _____ | <input type="checkbox"/> After Allowance Communication to Group
<input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences
<input type="checkbox"/> Appeal Communication to Group (Appeal Notice, Brief, Reply Brief)
<input type="checkbox"/> Proprietary Information
<input type="checkbox"/> Status Letter
<input checked="" type="checkbox"/> Other Enclosure(s) (please identify below):
See attached |
|--|---|---|

Remarks

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm or Individual name	BakerBotts LLP 30 Rockefeller Plaza New York, NY 10112
Signature	<i>Rochelle K. Seide</i> Att Name: Rochelle K. Seide PTO Reg: 32,300
Date	May 29, 2003

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, PO Box 1450, Alexandria, VA 22313-1450 on this date: May 29, 2003

Typed or printed name	Rochelle K. Seide
Signature	<i>Rochelle K. Seide</i>
Date	May 29, 2003

Title: METHOD FOR LARGE SCALE cDNA CLONING AND SEQUENCING BY CIRCULATING
SUBTRACTION

Use Space Below for Additional Information:

Enclosures:

Supplemental Information Disclosure Statement (3 sheets)
Form PTO-1449 (1 sheet)
Copies of IDS documents (1 bound volume)
BB check 171786 for \$180
Return Postcard

**BAKER BOTTS LLP**

FEE TRANSMITTAL for FY 2003

Effective 01/01/2003. Patent fees are subject to annual revision.

☐ Applicant claims small entity status. See 37 CFR 1.27**TOTAL AMOUNT OF PAYMENT****(\$)** 180**Complete if Known**

Application Number	09/938,744
Filing Date	August 24, 2001
First Named Inventor	Yumin Mao et al.
Examiner Name	Whisenant, Ethan C.
Art Unit	1634
Attorney Docket No.	A34606-PCT-USA-A

METHOD OF PAYMENT (check all that apply)☒ Check ☐ Credit card ☐ Money Order ☐ Other ☐ None☒ Deposit Account:Deposit
Account
Number
Deposit
Account
Name

02-4377

Baker Botts LLP

The Commissioner is authorized to: (check all that apply)

☒ Charge fee(s) indicated below ☐ Credit any overpayments☐ Charge any additional fee required under 37CFR 1.16 and 1.17☐ Charge fee(s) indicated below, except for the filing fee to the above-identified deposit account.**FEE CALCULATION****1. BASIC FILING FEE**

Large Entity		Small Entity		Fee Description	Fee Paid
Fee Code	Fee (\$)	Fee Code	Fee (\$)		
1001	750	2001	375	Utility filing fee	
1002	330	2002	165	Design filing fee	
1003	520	2003	260	Plant filing fee	
1004	750	2004	375	Reissue filing fee	
1005	160	2005	80	Provisional filing fee	

SUBTOTAL (1) (\$)

0

2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE

		Extra Claims	Fee from below	Fee Paid
Total Claims		- 20 = 0	X	0
Independent Claims		- 3 = 0	X	0
Multiple Dependent				

Large Entity		Small Entity		Fee Description
Fee Code	Fee (\$)	Fee Code	Fee (\$)	
1202	18	2202	9	Claims in excess of 20
1201	84	2201	42	Independent claims in excess of 3
1203	280	2203	140	Multiple dependent claim, if not paid
1204	84	2204	42	** Reissue independent claims over original patent
1205	18	2205	9	** Reissue claims in excess of 20 and over original patent

SUBTOTAL (2)

(\$)

**or number previously paid, if greater; For Reissues, see above

FEE CALCULATION (continued)**3. ADDITIONAL FEES**

Large Entity Small Entity

Fee Code	Fee (\$)	Fee Code	Fee (\$)	Fee Description	Fee Paid
1051	130	2051	65	Surcharge - late filing fee or oath	
1052	50	2052	25	Surcharge - late provisional filing fee or cover sheet	
1053	130	1053	130	Non-English specification	
1812	2,520	1812	2,520	For filing a request for <i>ex parte</i> reexamination	
1804	920*	1804	920*	Requesting publication of SIR prior to Examiner action	
1805	1,840*	1805	1,840*	Requesting publication of SIR after Examiner action	
1251	110	2251	55	Extension for reply within first month	
1252	410	2252	205	Extension for reply within second month	
1253	930	2253	465	Extension for reply within third month	
1254	1,450	2254	725	Extension for reply within fourth month	
1255	1,970	2255	985	Extension for reply within fifth month	
1401	320	2401	160	Notice of Appeal	
1402	320	2402	160	Filing a brief in support of an appeal	
1403	280	2403	140	Request for oral hearing	
1451	1,510	1451	1,510	Petition to institute a public use proceeding	
1452	110	2452	55	Petition to revive - unavoidable	
1453	1,300	2453	650	Petition to revive - unintentional	
1501	1,300	2501	650	Utility issue fee (or reissue)	
1502	470	2502	235	Design issue fee	
1503	630	2503	315	Plant issue fee	
1460	130	1460	130	Petitions to the Commissioner	
1807	50	1807	50	Processing fee under 37 CFR 1.17(q)	
1806	180	1806	180	Submission of Information Disclosure Stmt	180
8021	40	8021	40	Recording each patent assignment per property (times number of properties)	
1809	750	2809	375	Filing a submission after final rejection (37 CFR 1.129(a))	
1810	750	2810	375	For each additional invention to be examined (37 CFR 1.129(b))	
1801	750	2801	375	Request for Continued Examination (RCE)	
1802	900	1802	900	Request for expedited examination of a design application	

Other fee (specify)

*Reduced by Basic Filing Fee Paid

SUBTOTAL (3) (\$)

180

SUBMITTED BY

Name (Print/Type)

Rochelle K. Seide

Registration No.
(Attorney/Agent)

32,300

(Complete if applicable)

Telephone (212) 408-2500

Signature

Rochelle K. Seide

Date

May 29, 2003



A34606-PCT-USA-A 072975.0111
PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Yumin Mao et al.
Serial No. : 09/938,744 Examiner : Whisenant, Ethan C.
Filed : August 24, 2001 Group Art Unit : 1634
For : METHOD FOR LARGE SCALE cDNA CLONING AND SEQUENCING
BY CIRCULATING SUBTRACTION

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

I hereby certify that this paper is being deposited with the United States Postal Service as first class mail in an envelope addressed to:
Commissioner for Patents, P.O. Box 1450, Arlington, VA 22313-1450

May 29, 2003

Date of Deposit

Rochelle K. Seide
Attorney Name

Rochelle K. Seide
Signature

32,300

PTO Registration No.

May 29, 2003

Date of Signature

Commissioner for Patents
P.O. Box 1450
Arlington, VA 22313-1450

Dear Sir:

In accordance with 37 C.F.R. §1.56 and §1.97(c)(2), Applicant respectfully requests that the documents relating to the above-identified application listed herein in reverse chronological alphabetical order be considered and made of record in the U.S. Patent and Trademark Office.

1. Jacobs K, U.S. Patent No. 5,712,116 issued on January 27, 1998;
06/04/2003 EAREGAY1 00000001 09938744
01 FC:1806 180.00 OP

2. Yin C et al., 1998, "Characterization of FD-thermostable reverse transcriptase (FD-TRT)" *Journal of Fudan University (Natural Science)* 37(2):225-228;
3. Zheng Z et al., 1998, "Some enzymatic characteristics of FD thermostable reverse transcriptase (FD-TRT)" *Chinese Journal of Biochemistry and Molecular Biology* 14(2):170-174;
4. Guegler KJ, International PCT Application No. PCT/US96/08510, published as WIPO Publication No. WO 96/38591 on December 5, 1996;
5. Keene JD et al., U.S. Patent No. 5,525,495 issued on June 11, 1996;
6. Shirozu M et al., 1996, "Characterization of novel secreted and membrane proteins isolated by the signal sequence trap method" *Genomics* 37(3):273-280;
7. Kaartinen V et al., 1995, "Abnormal lung development and cleft palate in mice lacking TGF-beta 3 indicates defects of epithelial-mesenchymal interaction" *Nat Genet* 11(4):415-421;
8. Kato S et al., European Patent Application No. EP 0426455 published May 2, 1991; and
9. Morrow JF, 1974, "Mapping the SV40 chromosome by use of restriction enzymes" Doctoral thesis (Stanford Univ., Stanford, CA; Lane Medical Library Catalog No. 3781 1974 M3), pp. 101-190.

The referenced citations are listed in the accompanying PTO Form 1449. Copies of the documents are submitted herewith in one bound volume. English abstracts have been provided for documents 2 and 3 which are in Chinese.

Applicants also enclose herewith copies of the International Search Report and the International Preliminary Exam Report that were issued in connection with International Application No. PCT/CN00/00036 (WO 00/52200) to which the instant application claims priority.

Identification of the documents listed in the attached PTO Form 1449 is not to be construed as an admission of Applicants or Attorneys for Applicants that such documents are available as "prior art" against the above-identified application.

Applicants enclose herewith the fee required under 37 C.F.R. §1.17(p) and §1.97(c)(2). Applicants do not believe that any additional fees are required with this paper. Nevertheless, the Commissioner is hereby authorized to charge any fees occasioned by this submission not otherwise enclosed herewith to Deposit Account No. 02-4377. Please credit any overpayment of fees associated with this filing to the above-identified deposit account. A duplicate of this page is enclosed.

May 29, 2003

Respectfully submitted,

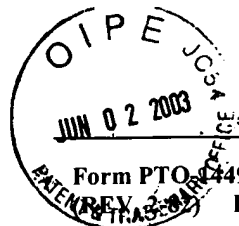


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Enclosures

Form PTO 449 U.S. Department of Commerce
Patent and Trademark OfficeAtty. Docket No.
A34606-PCT-USA-ASerial No.
09/938,744**INFORMATION DISCLOSURE STATEMENT
BY APPLICANT**

(Use several sheets if necessary)

Applicant
Yumin Mao et al.Filing Date
August 24, 2001Group
1634**U.S. PATENT DOCUMENTS**

*Exam. Init.	Document No.	Date	Name	Class	Subclass	Filing Date if Appropriate
1.	5 7 1 2 1 1 6	01/27/1998	Jacobs K			
5.	5 5 2 5 4 9 5	06/11/1996	Keene JD et al			

FOREIGN PATENT DOCUMENT

Document No.	Date	Country	Class	SubClass	Translator Yes No
4. 9 6 3 8 5 9 1	12/05/1996	WIPO Publication (WO)			
8. 0 4 2 6 4 5 5	05/02/1991	Europe (EP)			

OTHER DOCUMENTS (including Author, Title Date, Pertinent Pages, Etc.)

2.	Yin C et al., 1998, "Characterization of FD-thermostable reverse transcriptase (FD-TRT)" <i>Journal of Fudan University (Natural Science)</i> 37(2):225-228
3.	Zheng Z et al., 1998, "Some enzymatic characteristics of FD thermostable reverse transcriptase (FD-TRT)" <i>Chinese Journal of Biochemistry and Molecular Biology</i> 14(2):170-174
6.	Shirozu M et al., 1996, "Characterization of novel secreted and membrane proteins isolated by the signal sequence trap method" <i>Genomics</i> 37(3):273-280
7.	Kaartinen V et al., 1995, "Abnormal lung development and cleft palate in mice lacking TGF-beta 3 indicates defects of epithelial-mesenchymal interaction" <i>Nat Genet</i> 11(4):415-421
9.	Morrow JF, 1974, "Mapping the SV40 chromosome by use of restriction enzymes" Doctoral thesis (Stanford Univ., Standford, CA; Lane Medical Library Catalog No. 3781 1974 M3), pp. 101-190

NY02:441154.1

Examiner

Date Considered

* Examiner: Initial citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not conformance and not considered. Include copy of this form with next communication to applicant.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/CN00/00036

A. CLASSIFICATION OF SUBJECT MATTER

IPC⁶ : C12Q1/68,C12N15/10

According to International Patent Classification(IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched(classification system followed by classification symbols)

IPC⁶ : C12Q1/68,C12N15/10

Documentation searched other than minimum documentation to the extent that such documents are included in the field searched

Electronic data base consulted during the international search(name of data base and, where practicable, search terms used)

CNPAT, PAJ, EPOQUE

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant claim No.
A	W096/38591, 05. DEC. 1996 see the whole document.	1-10
A	EP0426455 8. MAY. 1991 see the whole document.	1-10
A	US5712116, 27. JAN. 1998 see the whole document.	1-10
A	US5525495, 11. JUN. 1996. see the whole document.	1-10



Further documents are listed in the continuation of Box C.



See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason(as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

17.MAR.2000 (17.03.00)

Date of mailing of the international search report

30 MAR 2000 (30.03.00)

Name and mailing address of the ISA/

The Chinese Patent Office
6, Xitucheng Road, Haidian District,
Beijing, 100088, China

Facsimile No. 86-010-62019451

Authorized officer ZENG,Fanhui

Telephone No. 86-010-62093733

INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.
PCT/CN00/00036

Patent document cited in search report	Publication date	Patent family members	Publication date
WO9638591	05.12.96	CA2220955	05.12.96
		AU6032596	18.12.96
		EP0828831	18.03.98
		JP11506332	08.06.99
EP0426455	08.05.91	JP4117292	17.04.92
		US5624826	29.04.97
US5712116	27.01.98	US5536637	16.07.96
US5525495	11.06.96	WO9323531	25.11.93
		AU4231693	13.12.93
		US5444149	22.08.95
		US5698427	16.12.97
		US5773246	30.06.98

PATENT COOPERATION TREATY

From the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To:

Xu Xun
Shanghai Patent & Trademark Law Office
Guiping Road 435, Shanghai 200233
P.R.China

PCT

NOTIFICATION OF TRANSMITTAL OF
THE INTERNATIONAL PRELIMINARY
EXAMINATION REPORT
(PCT Rule 71.1)

Date of mailing
(day/month/year) 05.10.00

Applicant's or agent's file reference
990477 PC

IMPORTANT NOTIFICATION

International application No.
PCT/CN00/00036

International filing date (day/month/year)
25.02.00

Priority date (day/month/year)
26.02.99

Applicant
SHANGHAI BIORIGIN GENE DEVELOPMENT CO., LTD, et al.

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary examination report and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.

4. REMINDER

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

Name and mailing address of the IPEA/

The Chinese Patent Office
(IPEA/CN)

Authorized officer

Tel. 62093733

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 990477 PC	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/CN00/00036	International filing date (day/month/year) 25.02.00	Priority date (day/month/year) 26.02.99
International Patent Classification (IPC) or national classification and IPC Int. Cl : C12Q1/68, C12N15/10		
Applicant SHANGHAI BIORIGIN GENE DEVELOPMENT CO., LTD, et al.		

1.	This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2.	<p>This REPORT consists of a total of 3 sheets, including this cover sheet.</p> <p><input type="checkbox"/> This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of sheets.</p>
3.	<p>This report contains indications relating to the following items:</p> <ul style="list-style-type: none"> I <input checked="" type="checkbox"/> Basis of the report II <input type="checkbox"/> Priority III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability IV <input type="checkbox"/> Lack of unity of invention V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement VI <input type="checkbox"/> Certain documents cited VII <input type="checkbox"/> Certain defects in the international application VIII <input type="checkbox"/> Certain observations on the international application

Date of submission of the demand 18.09.2000	Date of completion of this report September 26, 2000
Name and mailing address of the international preliminary examining authority: The Chinese Patent Office	Authorized officer Telephone No. 62093733

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. **PCT/CN00/00036**

I. Basis of the report

1. This report has been drawn on the basis of *(substitute sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to the report since they do not contain amendments.)*:

☒ the international application as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
☐ the language of publication of the international application (under Rule 48.3(b)).
☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority in written form.
☐ furnished subsequently to this Authority in computer readable form.
☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
☐ the claims, Nos.:
☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/CN00/00036

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes:	Claims	1-10
	No:	Claims	
Inventive step (IS)	Yes:	Claims	1-10
	No:	Claims	
Industrial applicability (IA)	Yes:	Claims	1-10
	No:	Claims	

2. Citations and explanations

The essential technical features of Claims 1-10 have not been searched in the prior art.

Moreover, these technical features are not obvious when compared with the prior art, and have industrial applicability. Therefore, Claims 1-10 possess novelty, inventiveness and industrial applicability.